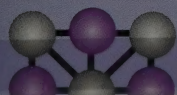


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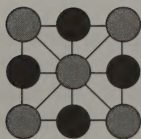
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**Ministry of Research,
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Te Manatu Putaiao

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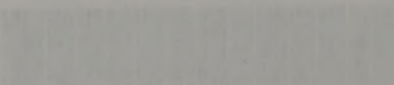
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MINISTRY OF RESEARCH, SCIENCE AND TECHNOLOGY

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 MINISTRY OF RESEARCH, SCIENCE AND TECHNOLOGY

Responsible Minister: Minister of Research, Science and Technology

TERMS AND DEFINITIONS USED

APEC	Asian Pacific Economic Co-operation Forum
ASEAN	Association of South East Asian Nations
CABI	Cab International
CRIIs	Crown Research Institutes
CSC	Commonwealth Science Council
EEZ	Exclusive Economic Zone
HURDIT	Human Resources Industrial Technology Network
IIR	International Institute of Refrigeration
IPCC	Intergovernmental Panel on Climate Change
IST	APEC Working Group on Industrial Science and Technology
ISTAC	International Science and Technology Advisory Committee
KSA	Key Science Area
MAG	Ministerial Advisory Group on Research, Science and Technology
Non-DOC	Non-Departmental Output Class
NSS	National Science Strategy
OECD	Organisation for Economic Co-operation and Development
PECC	Pacific Economic Co-operation Council
PGSF	Public Good Science Fund
R&D	Research and Development
RDRC	Ross Dependency Research Committee
RS&T	Research, Science and Technology
RVC	Research Vessel Committee
S&T	Science and Technology
SATPAC	Science and Technology Promotion Advisory Committee
STC	Scientific and Technological Cooperation
UNCED	United Nations Conference on Environment and Development
UNCLOS	United Nations Convention on Law of the Sea
UNESCO	United Nations Educational, Scientific and Cultural Organisation

STATEMENT OF RESPONSIBILITY

The forecast Financial Statements of the Ministry of Research, Science and Technology for the year ending 30 June 1997 contained in this report have been prepared in accordance with section 34A of the Public Finance Act 1989.

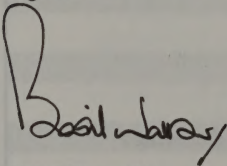
The Chief Executive of the Ministry of Research, Science and Technology acknowledges, in signing this statement, that he is responsible for the forecast financial statements contained in this report.

The financial performance forecast to be achieved by the Ministry for the year ending 30 June 1997 that is specified in the statement of objectives is as agreed with the Minister of Research, Science and Technology who is the Minister responsible for the financial performance of the Ministry of Research, Science and Technology.

The performance for each class of outputs forecast to be achieved by the Ministry for the year ending 30 June 1997 that is specified in the statement of objectives is as agreed with the Minister of Research, Science and Technology who is responsible for the Vote administered by the Ministry.

We certify that the information contained in this report is consistent with the appropriations contained in Estimates for the year ending 30 June 1997 that are being laid before the House of Representatives under section 9 of the Public Finance Act 1989.

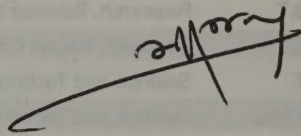
Signed



Chief Executive

15 April 1996

Countersigned



Chief Financial Officer

15 April 1996

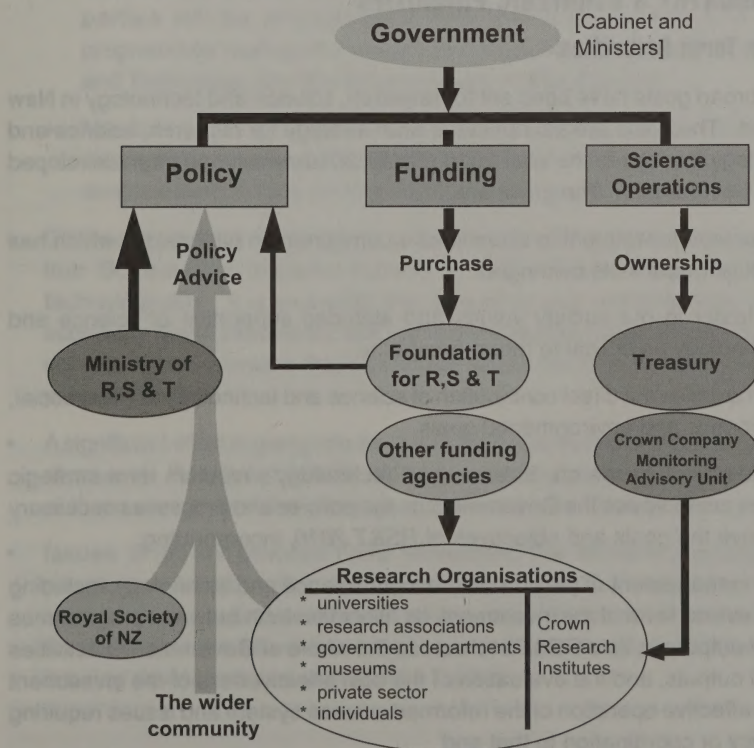
PART A - INTRODUCTORY INFORMATION

THE ROLE OF THE MINISTRY OF RESEARCH, SCIENCE AND TECHNOLOGY IN THE SCIENCE SYSTEM

The Government's involvement in the science system is structured so that a clear separation is maintained between the functions of policy advice, the funding of science (purchase) and science operations (ownership). The roles of the key organisations are summarised in Figure 1.

The particular role of the Ministry of Research, Science and Technology is to provide advice to the Government on science and technology policy and scientific advice on policy in general, to facilitate the overall coordination of science and technology activities and networks, and to provide services to the Government in regard to contract management, international science and technology linkages, and science and technology information. The Ministry has no permanent operational responsibilities in science and technology, both to avoid conflict of interest with its advisory function and to reflect the general policy of restricting core departments to activities which are best handled at governmental level.

Figure 1: The Overall Organisational Structure of the Science System



THE MINISTRY'S MISSION STATEMENT

The mission of the Ministry is to promote, through the provision of advice to the Minister and the provision of government level services to science providers and users, the effective and continuing contribution of research, science and technology to the quality of life and prosperity of the people in New Zealand.

This mission is implemented by:

- providing ministerial services and advice to the Minister on science and technology policy and investment in science and technology
- arranging for scientific and technology advice on public policy in general
- facilitating the coordination of science funding and research
- providing contract management services to the Minister in relation to the overall RS&T Vote
- collecting and disseminating science and technology information, and
- facilitating international science and technology linkages through intergovernmental arrangements.

THE MINISTRY'S STRATEGIC PRIORITIES

Longer Term Priorities

Three broad goals have been set for research, science and technology in New Zealand. The goals are set out in the draft strategy for research, science and technology through to the year 2010 (*RS&T:2010*) which has been developed by the Government. The goals are:

- To ensure investment in science as a component in national life which has cultural value in its own right.
- To foster in our society values and attitudes supportive of science and technology as critical to future prosperity.
- To maximise the direct contribution of science and technology to wider social, economic and environmental goals.

The Ministry of Research, Science and Technology's medium term strategic priorities are to advise the Government on the policies and processes necessary to achieve the goals and objectives of *RS&T 2010*, incorporating:

- the management of public investment in science and technology, including the overall level of the investment, its allocation both between programmes and outputs in Vote RS&T and across the whole of Government's activities and outputs, and the evaluation of the cost effectiveness of the investment the effective operation of the reformed science system and issues requiring policy or coordination to that end

 MINISTRY OF RESEARCH, SCIENCE AND TECHNOLOGY

- the strengthening of the science content in Government decision-making, both in regard to investment in science and public policy development in general
- the effective uptake and utilisation of technology in the economy and in society, incorporating that from the global information base as well as that generated by publicly-funded research and development in New Zealand, and
- the development other policies and strategies required to meet the goals of *RS&T:2010*.

Priorities for 1996/97

The priorities for 1996/97 are as follows:

- An increasingly important role for the Ministry is that of providing advice on management of public investment in science. There are three areas of importance for next year:
 - ♦ The development of the science envelope process as an administrative input to the Budget needs to be completed so that increases in science investment are allocated so as to ensure that the overall portfolio is cost effective.
 - ♦ Monitoring of the management of public investment in science by third parties will be strengthened, with particular attention to those programmes managed through the Foundation for Research, Science and Technology and the Royal Society of New Zealand.
 - ♦ Monitoring will be complemented and enhanced by the development of a comprehensive evaluation programme for public investment in science, concentrating initially on the Public Good Science Fund.
- Continuing attention will be given to the role of the Chief Scientist in ensuring that Government decision-making is well informed scientifically and technologically. It is expected that biological and environmental issues, especially those associated with safeguarding New Zealand's borders and enhancing our overseas trade potential, will continue to dominate the work programme.
- A significant effort is going into the finalisation of a technology policy package at present. Priority in 1996/97 will be given to ensuring the implementation of those elements of the package approved by the Government.
- Issues of policy process have dominated the Ministry's policy work programme to date. Over the course of the year there will be a relative increase in the science content of policy work. The platform for this will be the material on the future knowledge base and associated capabilities, which is being developed as a part of *RS&T:2010*.

- Now that the science system has completed the move from restructuring to ongoing operation, there needs to be a greater level of attention to monitoring and, where necessary, fine-tuning system performance. In this regard, the scoping study carried out in 1995/96 on system performance indicators will begin to be translated into practical action.
- Science and Technology have always been global in nature, but globalisation will become more marked in the future as the effect of physical distance recedes and trade and other barriers are removed. The Ministry's international programme will develop a stronger strategic focus, defining and implementing the role of the Government in helping New Zealand firms and science providers to identify and react to the opportunities and challenges thrown up by globalisation.

FINANCIAL HIGHLIGHTS

Departmental Output Classes

In 1996/97, the Ministry expects to earn \$3.764 million (GST-exclusive) in revenue from the Crown for services it will supply under the four departmental output classes detailed in the Statement of Objectives in this report (p.18). It expects to incur expenses of \$3.764 million (GST-exclusive) in providing these services.

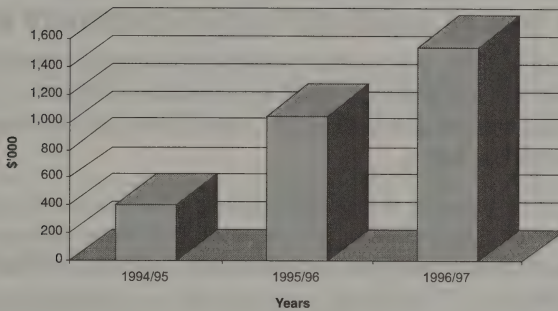
Overall financial trends are summarised in Table 1 below:

Table 1: Overall Financial Trends, 1994/95 to 1996/97

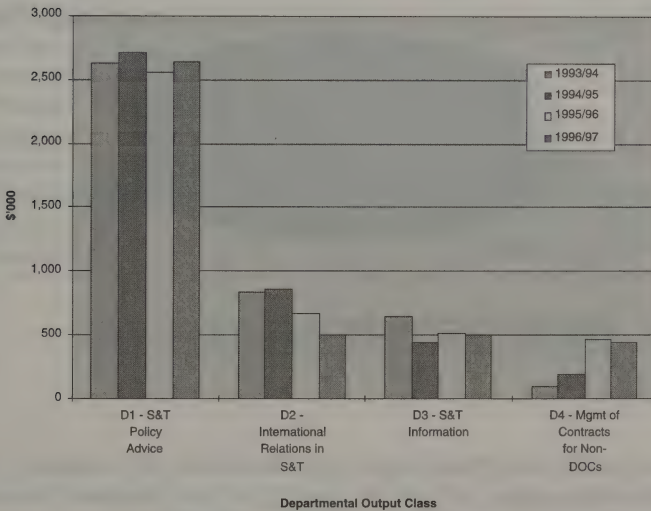
	1994/95 Actual \$000	1995/96 Estimated Actual \$000	1996/97 Budgeted \$000
Revenue: Crown	3,738	3,586	3,764
Revenue: Other	140	146	-
Output Expenses	3,993	3,650	3,764
Net Surplus/(Deficit)	(66)	-	45
Taxpayers Funds	616	616	616
Net Cash Flows from Operating Activities	624	282	295

The increase in Crown revenue in 1996/97 primarily reflects a commitment to additional work on the evaluation of public investment in science, to complement the substantial attention now being given to the effective management of that investment. These extra resources will complement a shift in emphasis which has been occurring within the context of existing resourcing. Work on the effective management of the Government's investment in science has been growing steadily over this time and will be the single largest component of the policy work programme in 1996/97, with particular emphasis on improving evaluation of the investment and the progressive implementation of the science "envelope" concept. The trends over time are shown in Figure 2.

MINISTRY OF RESEARCH, SCIENCE AND TECHNOLOGY

Figure 2: Management and Evaluation of Public Investment in Science and Technology, 1994/95 to 1996/97

Trends by output classes are illustrated in Figure 3 below:

Figure 3: Appropriation Trends by Output Class, 1993/94 to 1996/97

Expenditure on policy advice will continue to be the largest single component in total expenditure, but with significant changes in the scope of the expenditure, as explained above.

As explained in last year's report, the apparent reduction in the international relations area is due to the transfer of some funding into a non-departmental output class, to better reflect the nature of the work.

A significant increase in expenditure on the management of contracts has occurred, reflecting both the increase in the investment and an increase in the level of contract management being undertaken by the Ministry itself in particular areas.

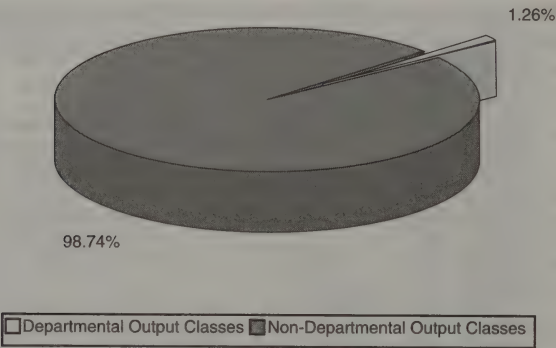
Non-Departmental Output Classes

As can be seen in Figure 4 below, a significant proportion of Vote Research, Science and Technology relates to appropriations for Non-Departmental Output Classes.

The Ministry administers 14 non-departmental output classes, totalling \$330.605 million in 1996/97. In addition, a small appropriation (\$78,000) is included in the Vote for the payment on behalf of the Crown of New Zealand's subscription to the Convention du Metre.

The Ministry is responsible for making payments for services supplied under non-departmental output classes, for ensuring that these appropriations are not exceeded, and for managing and monitoring, on behalf of the Minister of Research, Science and Technology, contracts with non-departmental providers. Each of the providers is responsible to the Minister for the performance in supplying those services.

Figure 4: Breakdown of Vote Research, Science and Technology, 1996/97



Details of the non-departmental appropriations within Vote Research, Science and Technology appear in Parts B1 and C2 of Vote Research Science and Technology in the Estimates of Appropriations 1996/97.

MINISTRY OF RESEARCH, SCIENCE AND TECHNOLOGY

PART B - FORECAST FINANCIAL STATEMENTS**OPERATING STATEMENT FOR THE YEAR ENDING 30 JUNE 1997**

	1995/96		1996/97
	Budgeted	Estimated Actual	Budgeted
	\$000	\$000	\$000
<i>Revenue</i>			
Crown	3,586	3,586	3,764
Departments	60	60	-
Other	86	86	-
Interest	45	60	45
Total Revenue	3,777	3,792	3,809
<i>Expenses</i>			
Output Expenses:			
Personnel	2,086	1,951	2,156
Operating	1,328	1,376	1,287
Depreciation	247	252	250
Other output expenses	-	-	-
Capital charge	71	71	71
Total Output Expenses	3,732	3,650	3,764
Other Expenses	-	-	-
Total Expenses	3,732	3,650	3,764
Surplus/(deficit) from operations	45	142	45
Profit on sale of physical assets	-	-	-
Extraordinary items	-	-	-
Net Surplus/(Deficit)	45	142	45

STATEMENT OF ESTIMATED FINANCIAL POSITION AS AT 30 JUNE 1996 AND FORECAST FINANCIAL POSITION AS AT 30 JUNE 1997

	Actual position as at 30 June 1995 \$000	Estimated Actual position as at 30 June 1996 \$000	Budgeted position as at 30 June 1997 \$000
Assets			
<i>Current Assets</i>			
Cash and bank balances	99	105	91
Short-term deposits with the Crown	700	600	500
Prepayments	10	10	10
Receivables and advances	29	5	5
Investments	-	-	-
Total Current Assets	838	720	606
<i>Non-Current Assets</i>			
Physical assets	759	824	841
Intangible assets	-	-	-
Total Non-Current Assets	759	824	841
Total Assets	1,597	1,544	1,447
Liabilities			
<i>Current Liabilities</i>			
Payables and provisions	309	325	325
Capital charge payable	-	-	-
Provision for payment of surplus	59	142	45
Provision for employee entitlements	97	85	85
Other current liabilities	516	376	376
Total Current Liabilities	981	928	831
Total Liabilities	981	928	831
<i>Taxpayers' Funds</i>			
General funds	616	616	616
Revaluation reserve	-	-	-
Total Taxpayers' Funds	616	616	616
Total Liabilities and Taxpayers' Funds	1,597	1,544	1,447

MINISTRY OF RESEARCH, SCIENCE AND TECHNOLOGY

STATEMENT OF CASH FLOWS FOR THE YEAR ENDING 30 JUNE 1997

	1995/96		1996/97
	Budgeted \$000	Estimated Actual \$000	Budgeted \$000
<i>Cash Flows from Operating Activities</i>			
Cash provided from:			
Supply of outputs to:			
Crown	3,586	3,586	3,764
Departments	-	-	-
Other	22	-	-
Interest	45	60	45
Cash disbursed to:			
Cost of producing outputs:			
Output expenses	(3,779)	(3,293)	(3,443)
Capital charge	(71)	(71)	(71)
Other expenses	-	-	-
Extraordinary items	-	-	-
Net Cash Flows from Operating Activities	(197)	282	295
<i>Cash Flows from Investing Activities</i>			
Cash provided from:			
Sale of investments	-	-	-
Sale of physical assets	50	50	23
Cash disbursed to:			
Purchase of investments	-	-	-
Purchase of physical assets	(287)	(367)	(290)
Net Cash Flows from Investing Activities	(237)	(317)	(267)
<i>Cash Flows from Financing Activities</i>			
Cash provided from:			
Capital contribution from the Crown	-	-	-
Cash disbursed to:			
Payment of surplus to the Crown	(59)	(59)	(142)
Repayment of capital to the Crown	-	-	-
Net Cash Flows from Financing Activities	(59)	(59)	(142)
Net Increase/(Decrease) in Cash Held	(493)	(94)	(114)
Opening total cash balances at 1 July	799	799	705
Effect of exchange rate changes	-	-	-
Closing Total Cash Balance	306	705	591

RECONCILIATION OF NET CASH FLOWS FROM OPERATING ACTIVITIES TO NET SURPLUS/(DEFICIT) IN THE OPERATING STATEMENT FOR THE YEAR ENDING 30 JUNE 1997

	1995/96		1996/97
	Budgeted	Estimated Actual	Budgeted
	\$000	\$000	\$000
Operating Surplus/(Deficit)	45	142	45
<i>Add/(deduct) non-cash expenses/ (revenues) from Operating Statement</i>			
Revaluations of commercial forests	-	-	-
Pension expenses	-	-	-
Unrealised foreign currency exchange (gain)/loss	-	-	-
Depreciation and Amortisation	247	252	250
Other non cash items	-	-	-
<i>Add/(deduct) non cash working capital reductions/(increases) from Balance sheet</i>			
(Increase)/decrease in receivables and advances	9	22	-
(Increase)/decrease in Debtor Crown	-	-	-
(Increase)/decrease in Prepayments	12	2	-
(Increase)/decrease in Payables and Provisions	3	16	-
Increase/(decrease) in Other accrued Liabilities	(516)	(140)	-
Increase/(decrease) in Employee Entitlements	3	(12)	-
Net Cash Flows from Operating Activities	(197)	282	295

MINISTRY OF RESEARCH, SCIENCE AND TECHNOLOGY

STATEMENT OF MOVEMENTS IN TAXPAYERS FUNDS (EQUITY) AS AT 30 JUNE 1997

	Estimated Actual position as at 30 June 1996 \$000	Budgeted position as at 30 June 1997 \$000
<i>Taxpayers' funds at start of period</i>	616	616
Add/(deduct) fundamental errors	-	-
Amended taxpayers' funds at start of period	616	616
<i>Movements during the year (other than flows to and from the Crown)</i>		
Add/(deduct) net surplus/(deficit)	142	45
Increase/(decrease) valuation reserves	-	-
Add/(deduct) Currency translation difference	-	-
Other changes in reserves	-	-
Total recognised revenues and expenses for the period	142	45
<i>Adjustment for flows to and from the Crown</i>		
Add capital contributions from the Crown during the period	-	-
(Deduct) Distributions to the Crown during the period		
Capital Withdrawals	-	-
Provision for payment of surplus to the Crown	(142)	(45)
Other	-	-
Add/(deduct)		
Asset/liability transfers between the department and the Crown	-	-
Asset/liability transfers between departments	-	-
Total Adjustments for flows to and from the Crown	(142)	(45)
Taxpayers Funds at the end of the period	616	616

STATEMENT OF SIGNIFICANT UNDERLYING ASSUMPTIONS

These statements have been compiled on the basis of Government policies and the interim outcome of negotiations between the Ministry of Research, Science and Technology and the Minister of Research, Science and Technology on the Purchase Agreement for 1996/97, at the time the statements were finalised.

These Forecast Financial Statements comply with generally accepted accounting practice, as recommended by the New Zealand Society of Accountants.

The measurement base applied is historical cost adjusted for revaluations of assets. Revaluations are made to reflect the forecast service potential or economic benefit to be obtained through the control of assets.

The accrual basis of accounting has been used for the preparation of these statements.

These forecast financial statements have been prepared on a going concern basis.

STATEMENT OF SIGNIFICANT ACCOUNTING POLICIES**Allocation of Costs**

Direct costs will be allocated to outputs based on actual values. Indirect costs will be allocated on a pro-rata basis, using personnel costs as the basis for allocation.

Classification of Costs

The Ministry classifies costs as direct or indirect based on whether or not the costs can be causally linked and assigned to an output. Indirect costs are those that cannot be reasonably attributed to an output on a direct basis, eg. accommodation rental, general insurance, electricity, support staff costs, bank fees, audit fees and corporate management.

Depreciation

Depreciation is provided for using the straight-line method at the following rates:

Computer equipment	25%
Motor vehicles	17.5%
Office Fitout	Spread over the remaining life of the accommodation lease
All Other Assets	20%

Fixed Assets

Fixed assets are generally stated at actual cost less accumulated depreciation, but may be revalued if market conditions justify.

Financial Instruments

The Ministry will be party to foreign exchange forward contracts to reduce material exposure to fluctuations in foreign currency exchange rates.

GST

The forecast financial reports have been prepared net of GST.

MINISTRY OF RESEARCH, SCIENCE AND TECHNOLOGY

**STATEMENT OF OBJECTIVES SPECIFYING THE FINANCIAL PERFORMANCE
FORECAST FOR THE MINISTRY OF RESEARCH, SCIENCE AND TECHNOLOGY
FOR THE YEAR ENDING 30 JUNE 1997**
Performance Indicators: 1995/96 and 1996/97

	Unit	1995/96		1996/97
		Budgeted	Estimated Actual	Budget
<i>Operating results</i>				
Revenue: other	\$000	146	146	-
Revenue: interest	\$000	45	60	45
Output expenses	\$000	3,732	3,650	3,764
Other expenses	\$000	-	-	-
Operating surplus before capital charge	\$000	116	213	116
Net surplus	\$000	45	142	45
<i>Working capital</i>				
Net current assets	\$000	102	(208)	(225)
Current ratio	%	120	78	73
Average debtors outstanding	days	-	-	-
Average creditors outstanding	days	52	77	74
<i>Resource utilisation</i>				
Physical assets:				
Total physical assets at year end	\$000	629	824	841
Additions as % of physical assets	%	16	45	35
Taxpayers' funds:				
Level at year-end	\$000	616	616	616
<i>Forecast net cash flows</i>				
Surplus/(deficit) operating activities	\$000	(197)	282	295
Net increase/(decrease) in cash held	\$000	(493)	(94)	(114)

STATEMENT OF OBJECTIVES SPECIFYING THE PERFORMANCE FORECAST FOR EACH OUTPUT CLASS FOR THE YEAR ENDING 30 JUNE 1997

The Ministry will provide output classes in 1996/97 which meet the requirements of the Vote Minister in terms of their nature, timeliness, quality and quantity specifications, and cost.

Summary of Departmental Output Classes

Departmental output classes to be delivered by the Ministry of Research, Science and Technology, and their associated revenue, expenses and surplus or deficit are summarised below.

Output Operating Statements: 1996/97

Departmental Output Class	Description	Revenue: Crown \$000	Revenue: Other \$000	Total Expenses \$000	Surplus/ (Deficit) \$000
Vote Research, Science and Technology					
D1 - Science and Technology Policy Advice	Advice provided on Science and Technology.	2,339	-	2,339	-
D2 - International Relations in Science and Technology	Advice and information on International science linkages, including administration of grants-in-aid fellowships and visits.	589	-	589	-
D3 - Science and Technology Information	Establishment and maintenance of key information and time series databases for Science and Technology in New Zealand.	442	-	442	-
D4 - Management of Contracts for Departmental Outputs	Administration and monitoring of contracts for the purchase of non-departmental outputs; other expenses on behalf of the Crown.	394	-	394	-
Total		3,764	0	3,764	0

MINISTRY OF RESEARCH, SCIENCE AND TECHNOLOGY

GST STATUS OF DEPARTMENTAL OUTPUT CLASSES FOR 1996/97

Departmental Output Classes	GST Exclusive (DFR) \$000	GST \$000	GST Inclusive (Vote) \$000
D1 - Science and Technology Policy Advice	2,339	292	2,631
D2 - International Relations in Science and Technology	589	73	662
D3 - Science and Technology Information	442	56	498
D4 - Management of Contracts for Non-DOCs	394	49	443
Total departmental output classes	3,764	470	4,234

Explanatory notes:

The forecast financial statements in this report present expenses (and revenue) exclusive of GST, in accordance with generally accepted accounting practice. When appropriated by Parliament, these expenses are inclusive of GST, in accordance with legislation. Thus:

- the *GST-exclusive* amounts for each departmental output class correspond to the figures included in this report, and
- the *GST-inclusive* amounts for each departmental output class correspond to the annual appropriations for 1996/97 appearing in Part B1 of the Main Estimates for Vote Research Science and Technology.

SERVICE PERFORMANCE OBJECTIVES - OUTPUT PERFORMANCE

Generic Output Measures

Generic quality, quantity and timeliness measures for outputs supplied within all the output classes are given below. More specific measures for individual outputs are listed where appropriate.

Quantity and Timeliness

Outputs will be of a size and scope and with target dates for delivery as described in the work programme set out in the Purchase Agreement negotiated between the Minister and the Chief Executive of the Ministry. These can be modified by agreement between the Minister and the Chief Executive during the course of the year.

This measure will be assessed by comparison of the actual work produced and its timeliness, in comparison with the commitments set out in the Purchase Agreement or as modified by agreement with the Minister during the year.

Coverage

A background service will be provided which includes the capacity to react urgently; regular evaluation of the impacts of Government policy, regulation and expenditure on the outcomes desired by the Government; timely briefings that can anticipate issues; and support for the Minister as required in Cabinet Committees, Caucus Committees, Select Committees and in the House.

The coverage achieved will however depend on the resources required to supply the work specified under each Output, as this specified work will have priority.

This measure will be assessed by ad-hoc verbal and written response from the Minister during the year, with a written summary assessment to be provided by the Ministry at year end, for endorsement by the Minister.

Cost

Outputs will be produced within the overall appropriation levels for each output class.

This measure will be assessed by the comparison of actual costs with those set out in the Estimates or as modified in the Supplementary Estimates.

Quality of Documents

Individual items of work will satisfy quality characteristics required for Cabinet papers and other important documents. These characteristics are:

Purpose:	The objective of the paper is clearly stated, it answers the questions asked by Ministers and demonstrates a clear understanding of the desired outcome(s) of Government or the Minister.
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MINISTRY OF RESEARCH, SCIENCE AND TECHNOLOGY

Scope and Relevance:	The paper identifies the symptoms and causes of the policy “problem” and makes explicit the assumptions behind the advice. The analysis is linked to the Government’s science strategy and other related Government policies and goals. Implications for other Government policy areas are identified.
Logic:	The paper offers a logical argument linking information and assumptions to the conclusions.
Accuracy:	All relevant information is included and is accurate, stating the range of uncertainty. The paper is based on the maximum practicable information and identifies known gaps that could significantly affect the conclusions.
Options:	A range of options is presented that provide clearly differentiated choices and these are rigorously evaluated using an appropriate analytical framework. Costs, benefits, consequences, and risks of the options are assessed as part of the analysis.
Consultation:	Evidence of thorough and timely consultation with other government departments and other stakeholders is presented, and their views incorporated as appropriate.
Implementation:	Issues of transition and implementation, technical feasibility, practicality and timing are considered, and compliance and administrative implications and costs are identified. Specific recommendations are made to ensure Ministers decide who is responsible and accountable for the process of implementation and accountable for the policy as implemented. Legislative implications are identified.
Presentation:	The paper is written in good simple English, has an accurate and concise summary, meets format requirements of the Cabinet Office Manual, and presents recommendations unambiguously and concisely to Ministers.
Funding:	The paper accurately and comprehensively describes the funding implications for the Government of the proposals put forward.
Publicity:	The paper provides advice on how publicity arising from decisions on the paper should be handled, including an assessment of key stakeholders who should be informed and how.

These quality characteristics will be assessed by:

- *a written summary assessment to be provided by the Ministry at year end for endorsement by the Minister, and*
- *ad-hoc feedback from Cabinet Office indicating that the Ministry's Cabinet papers meet Cabinet Office standards of presentation, including conciseness, clarity and consultation.*

Output Class D1 - Science and Technology Policy Advice

This Output Class comprises advice to the Minister on national research, science and technology policy. It comprises advice on the nature and scope of government interventions, including policies and legislation, the level of funding and national priorities for the Government's science and technology investment, human resource issues, and the application of science and technology; coordination of research, and scientific capabilities; scientific and technological advice on public policy in general; and the provision of Ministerial Services.

The work to be undertaken will be classified under the following Output headings:

Output No.	Output Name
1	Ministerial Services
2	Management of Public Investment in Science
3	Evaluation of Public Investment in Science
4	Application of the Science and Technology Knowledge Base
5	Science Capabilities and Coordination
6	Technical Advice on Policy Issues
7	General Policy Advice

Cost

Outputs in this class will be provided within the appropriated sum of \$2.631 million including GST. The GST exclusive sum of \$2.339 million will be funded by Revenue: Crown.

Quality

Quality measures for this Output Class are summarised on pp.27-28, following the detailed descriptions and quantity and timeliness measures for each Output.

Output 1: MINISTERIAL SERVICES**Description and Quantity**

This Output comprises preparation of draft replies for letters to the Minister, information requests, Parliamentary Questions and Official Information Act requests.

It is estimated that approximately 180 items will be handled in 1996/97. Demand will, however, be met as it occurs and the cost will adjust accordingly.

Output 2: MANAGEMENT OF PUBLIC INVESTMENT IN SCIENCE**Description, Quantity and Timeliness**

This Output comprises advice to the Minister on the management of the Government's investment in science, including structures and methodologies for analysis and decision-making, overall funding levels, allocation of funding between major components of the investment, including priorities, and priorities for the Public Good Science Fund (PGSF).

It will comprise a work programme providing the following key groups of deliverables:

- Advice on and executive support for the implementation of the science envelope concept for public investment in science, including the implementation of decisions made in the 1996 Budget and preparations for the 1997 Budget by early 1997; and implementation of 1997 Budget decisions by mid-1997.
- Report setting out a full stocktake and analysis of the knowledge base concept by the end of 1996, and the completion of two reports on particular issues or problems by mid-1997.
- Report on further development of priority setting processes for the PGSF, including improved databases, upgrading of the basic methodology and the assessment of new methodologies being developed elsewhere, to be provided by mid-1997.
- Reports, carried out in cooperation with the Foundation for Research, Science and Technology, reviewing the linkage between PGSF priority statements and research strategies, and analysing transaction costs for managing the PGSF, with these reports to be provided by early 1997.

Output 3: EVALUATION OF PUBLIC INVESTMENT IN SCIENCE**Description, Quantity and Timeliness**

This Output comprises advice to the Minister on the evaluation of the Government's investment in science, including the development of

methodologies and processes, the collection and analysis of evaluation data and the presentation and interpretation of evaluation results.

It will comprise a work programme providing the following key groups of deliverables:

- Reports setting out the further development of an evaluation framework for public investment in science, leading to a set of goals, indicators and trial methodologies for every component of the investment, initial testing of evaluation for selected components and a schedule and programme for overall implementation, with a comprehensive progress report provided by mid-1997.
- A report by mid-1997 on the first stage of implementation of an integrated evaluation programme for the PGSF, incorporating linkages into the overall evaluation programme and an initial evaluation analysis.

Output 4: APPLICATION OF THE SCIENCE AND TECHNOLOGY KNOWLEDGE BASE IN THE ECONOMY

Description, Quantity and Timeliness

This Output comprises advice to the Minister, including that arising from research and from the analysis of time series information produced under Output Class 3.0 on the application of the science and technology knowledge base in the economy, including technology sourcing and transfer, linkages between the science sector and enterprises, user funded research and development, intellectual property rights and technology uptake and technological innovation.

It will comprise a work programme providing the following key groups of deliverables:

- Reports describing the further development and advice on the technology components of innovation policy, the implementation of decisions by the government, including any appropriate rationalisation of existing technology-linked programmes and the incorporation of funding requirements into the science envelope process, and the carrying out of an attitudinal survey of businesses, with a final progress report to be provided by mid-1997.

Output 5: SCIENCE SYSTEM CAPABILITIES AND COORDINATION

Description, Quantity and Timeliness

This Output comprises advice to the Minister on the need for coordination to ensure that research and science are fully effective, the well-being of important science capabilities and policy options for addressing deficiencies in both areas, and the implementation of coordination arrangements.

It will comprise a work programme providing the following key groups of deliverables:

- Advice on the establishment of new arrangements for science coordination, and the implementation of new arrangements once approved, including marine science in the EEZ, biodiversity and social policy related research.
- Reports on the progress and effectiveness and issues arising from existing coordination arrangements for science, including those for Possum Control and Bovine Tb, Climate Change and Sustainable Land Management research.
- Report on current status and issues in relation to New Zealand's capabilities in pure and applied mathematics, by mid-1997.

Output 6: TECHNICAL ADVICE ON POLICY ISSUES

Description, Quantity and Timeliness

This Output comprises the provision of information and analysis on the development of public policy which ensures that policy advice arising is soundly based from a scientific and technological perspective; including information and analysis on projects initiated by the Minister or by Cabinet, and contributions to the policy work of other departments both directly and through officials committees.

It will comprise a work programme providing the following key groups of deliverables:

- Scientific and technical advice on specific policy issues, comprising climate change and CO₂ reduction, definition and development of marine resources (incorporating UNCLOS and the EEZ), biodiversity, public health, effectiveness of quarantine and border control, science issues related to phytosanitary and other non-tariff barriers to trade, land transport systems in the context of conservation and environmental impacts, with reports to be provided as and when appropriate.
- Scientific and technical advice on other topics on an ad-hoc basis arising from participation in officials' committees, directions from the Minister and on the Ministry's own initiative.

Output 7: GENERAL POLICY ADVICE

Description, Quantity and Timeliness

This Output comprises advice to the Minister on general aspects of national research, science and technology policy and includes advice on legislation, structural issues, Government interventions, executive support for Ministerial or other advisory arrangements; and contributions to policy development by other departments and through formal officials committees, excluding advice which is more appropriately included elsewhere in the Policy Advice Output Class.

 MINISTRY OF RESEARCH, SCIENCE AND TECHNOLOGY

It will comprise a work programme providing the following key groups of deliverables:

- Quarterly reports to the Minister on science and technology policy issues raised as a result of liaison visits to and other contacts with the science community.
- Administrative support for Government-established and other committees related to science and technology, including especially the Ministerial Advisory Group for Science and Technology (MAGST), the Research Vessel Committee (RVC), the science provider forum and Nga Kaitirotiro Putaiao (Maori Advisory Committee).
- Reports on science issues of significance to Maori, including Treaty claims regarding genetic resources, Maori attitudes to science, and follow-up to work in the previous year on Matauranga Maori and access to the science system.
- Reports on other specific issues, including the promotion of science and technology in New Zealand and its improved targeting and coordination, interaction between research funded by Vote RS&T and in the universities, either by the HRC or through EFTS funding, and the completion of a policy analysis of options for future legislative frameworks for RS&T.
- Advice on unspecified aspects of RS&T policy and legislation or policy issues affecting the research, science and technology portfolio but which are the primary responsibility of other agencies or of officials' committees, which arise at the initiative of other departments or which have to be addressed as a result of Ministerial or Cabinet directives.

Output Class 1.0 - Quality Measures

The following performance measures apply as appropriate to the outputs within this output class.

Performance Measure	Performance Standard
The extent to which Ministerials are completed on time and to a standard acceptable to the Minister.	95% or more.
The acceptability of Ministerials as measured by the level of rejection by the Minister.	10% or less.
The extent to which briefing material is provided to the Minister where answers to Ministerials raise significant policy issues, or where required to enable the Minister to discharge statutory responsibilities, or to support decision-making by the Minister or Cabinet.	No significant issues arise on which the Minister is not briefed in sufficient time.

Performance Measure	Performance Standard
<p>The extent to which analysis is intellectually rigorous and reflects best practice as measured by peer review on major projects and by internal assessment for other work.</p>	<p>90% or more of reviews and assessments provide a positive assurance.</p>
<p>The extent to which advice incorporates the results of consultation with key stakeholders which is comprehensive, provides sufficient time for response and is accurate, as measured by formal feedback for selected major projects and evidenced by written internal confirmation for other work.</p>	<p>Internal confirmation always provided.</p> <p>Formal feedback is positive overall in 90% or more of cases.</p>
<p>The extent to which policy proposals are linked to relevant and measurable performance indicators to enable adequate measurement of policy performance.</p>	<p>Performance indicators always incorporated.</p>
<p>The extent to which substantial scientific and technological reports produced internally or coordinated externally are subject to peer review to measure accurately scientific credibility, reflection of up to date knowledge and understanding of the relevant branches of science and technology.</p>	<p>85% of substantial reports are subjected to peer review and the results of peer review always considered in the final report.</p>
<p>[Substantial reports are defined as those requiring a significant level of research and/or other preparation.]</p>	
<p>The extent to which all statutory documentation is completed within the time stipulated in the Act, is intra vires, and conforms with any relevant legal tests.</p>	<p>Always achieved.</p>

OUTPUT CLASS D2 - INTERNATIONAL RELATIONS IN SCIENCE AND TECHNOLOGY

Description, Quantity and Timeliness

This Output Class comprises the provision of strategic advice and information on international science linkages, reports on reviews of international science and technology collaboration with selected countries or regions to provide the basis for the development of strategies for future collaboration, programmes for the maintenance and development of science and technology relations with other countries, through participation in intergovernmental science and technology arrangements, support of membership of international and regional organisations, and selection of recipients for grant-in-aid funds provided by other countries.

It will comprise a work programme providing the following key groups of deliverables:

- Implementation of bilateral intergovernmental science relations with countries in the Asia-Pacific region, including provision of information, implementation of formal obligations under STC arrangements, organisation of overseas visitor programmes and other activities; with a particular but not exclusive emphasis on relations with Australia, USA, Japan, China, Malaysia, the Philippines, Korea, Chinese Taipei and Chile.
- Coordination of science and technology participation in regional groupings in the Asia-Pacific region, including especially APEC and ASEAN.
- Implementation of bilateral intergovernmental relations with countries and regional groupings in the rest of the world, ie. other than in the Asia-Pacific region, including provision of information, implementation of formal obligations under STC arrangements, organisation of overseas visitor programmes and other activities, with a particular but not exclusive emphasis on the Federal Republic of Germany, France and the European Union.
- Coordination of New Zealand's science and technology participation in governmental international organisations, including especially the OECD, but also CSC, UNESCO, IIR, CABI and others.

Cost

Outputs in this class will be provided within the appropriated sum of \$0.662 million including GST. The GST exclusive sum of \$0.589 million will be funded by Revenue: Crown.

Output Class 2.0 - Quality Measures

Performance Measure	Performance Standard
<p>The extent to which formal bilateral arrangements (including especially STC agreements) are implemented in accordance with those documented obligations for which resources are supplied.</p> <p>The extent to which support for bilateral relations outside of formal arrange-ments and for science and technology participation in multilateral forums and international organisations, is in accordance with the stated requirements of the Minister, and enhances New Zealand's interests as assessed internally in writing.</p>	<p>All resourced obligations met, unless otherwise agreed with the bilateral partner.</p> <p>Internal assessments provide a positive assurance in all cases.</p> <p>Stated requirements fully met in 90% or more of cases and largely met in all cases.</p>

Output Class D3 - Science and Technology Information

Description, Quantity and Timeliness

This Output Class comprises the provision of time series information on research and development expenditure and personnel in the enterprise, government and higher education sectors, including international comparisons; technology and technological innovation; scientific and technological human resources in New Zealand; productivity and well being of the science and technology community; the productivity and adequacy of the science infrastructure, and other time series information relevant to assessing changes in the performance and characteristics of New Zealand's science system; and printed and computer information bases on the location of scientific organisations, scientific capabilities and key contact people in New Zealand.

It will comprise a work programme providing the following key groups of deliverables:

- Reports on the time series database of research and development expenditure, personnel and the technology balance of payments to include collection and publication of results, and provision of information from the database to the OECD and clients within New Zealand.
- Reports publicising human resources information in science and technology, in user-friendly format and targeted at key groups to improve human resource-related decision-making by students, educational institutions and employers.
- Report setting out a pilot survey on collecting information on R&D skills in business to complement existing surveys for the core science sector.
- Report on implementation of a small number of indicators for the performance, state and well-being of the science and technology system, with these indicators selected from the feasibility study carried out in 1995/96, taking account of value to users, cost and practicability.

Cost

Outputs in this class will be provided within the appropriated sum of \$0.498 million including GST. The GST exclusive sum of \$0.442 million will be funded by Revenue: Crown.

Output Class 3.0 - Quality Measures

Performance Measure	Performance Standard
<p>The extent to which surveys of research and development expenditures meet or exceed international standards prescribed by the OECD; as measured by a written internal assurance provided in each case.</p> <p>The extent to which information is checked for reliability and problem information validated with respondents, is up-to-date, has a defined level of statistical accuracy and consistency, is maintained by revising historical data to match current year adjustments as necessary and employs consistent definitions from year to year; as measured by a written internal assurance provided in each case.</p>	<p>Always achieved.</p> <p>Written assurance is positive on the majority of parameters in all cases.</p>

Output Class D4 - Management of Contracts for Non-Departmental Output Classes

Description, Quantity and Timeliness

This Output Class comprises the management, on behalf of the Crown, of contracts for the provision of policy advice on science and technology, contract management for science and technology outputs, public good science and technology, Non-Specific Output Funding for public good science and technology, promotion of technology for business growth. science and technology publications, national measurement standards, coordination of science, science and technological advice for development of public policy, human resource development for science and technology, international science and technology relations, promotion of science and technology and science and technology education, and membership of the Convention du Metre.

It will comprise a work programme providing the following key groups of deliverables:

- Negotiation and monitoring of purchase agreements with pre-specified providers for particular non-departmental output classes within Vote RS&T, in accordance with instructions from the Minister; with these providers to include especially the Foundation for Research, Science and Technology, the Royal Society of New Zealand, Industrial Research Ltd (for national measurement standards), and the Carter Observatory (public astronomy).
- Management of contracts for the provision of contestable non-departmental outputs in accordance with instructions from the Minister; with these outputs to include those making up all or a part of the non-departmental output classes for Coordination of science, Scientific and technological advice on the development of public policy, and Promotion of technology for business growth.
- Management of contracts for the promotion of science and technology and science and technology education, including executive support for the Science and Technology Promotion Advisory Committee (SATPAC)
- Management of contracts for the promotion of international science and technology linkages, including executive support for the International Science and Technology Advisory Committee (ISTAC).

Cost

Outputs in this class will be provided within the appropriated sum of \$0.443 million including GST. The GST exclusive sum of \$0.394 million will be funded by Revenue: Crown.

Output Class 4.0 - Quality Measures

Performance Measure	Performance Standard
<p>The extent to which Purchase Agreements and contestably awarded contracts with suppliers of Non-Departmental Outputs are written in plain English, are unambiguous and fully reflect any contractual parameters set down by the Minister for Research, Science and Technology.</p>	<p>Negotiating parameters fully reflected.</p> <p>Not more than one instance per contract requiring clarification or resolution during the contract term.</p>
<p>The extent to which Purchase Agreements are based on full cost disclosure by the provider and stipulation of separate prices for each Output Class.</p>	<p>Always achieved.</p>
<p>The extent to which agreements are negotiated by specified deadlines, and payments are made by the due dates and are correct.</p>	<p>Majority of agreements negotiated by specified deadlines and payments always made by due dates and correct.</p>
<p>The extent to which critiques of monitoring reports identify any deficiencies in the reports and in the performance of the provider organisation or the Non-Departmental Output Classes being managed, and critiques provided within specified time limits.</p>	<p>Not more than one instance per agreement for each year of a deficiency being identified externally or by the Minister which is not identified in the associated critiques.</p> <p>95% of critiques provided within specified time limits.</p>
<p>The extent to which Purchase Agreements require provider reports summarising delivery against agreed specification, identification of significant variations and corrective actions proposed and potential risk.</p>	<p>Always achieved.</p>
<p>The extent to which funding allocated to contracts on a contestable basis is in accordance with allocation criteria, as measured by the successful handling of any appeals by providers.</p>	<p>Either no appeals or all appeals successfully dealt with.</p>
<p>The extent to which executive support provided to advisory committees on funding, including SATPAC and ISTAC, is to the satisfaction of the committee chair, as measured by a written statement provided each year.</p>	<p>All statements positive overall</p>

PART C - ADDITIONAL INFORMATION

Statement of Values

The Ministry recognises and applies the statement of vision, purpose, principles and values for the New Zealand public service.

In addition, the Ministry has the following values and attributes as an organisation:

- a firm sense of the important role of science and technology in contributing to New Zealand's future
- a striving for excellence and continuing improvement in our work, and a pride in achieving high quality, timely and effective results
- responsiveness to the needs and views of those we work and interact with
- a professional approach based on informed and competent analysis, wide and objective inquiry, and maintenance of high standards of professional and intellectual integrity
- a commitment to looking forward, and
- a commitment to making the best use of the total resources of the Ministry in all that we do.

Principles of Operation

The Ministry has the following principles of operation:

While maintaining our pre-eminent commitment to serving the Minister and the needs of the Government, also incorporating in our work knowledge of and sensitivity to the processes of research, science and technological innovation, the professional concerns of scientists and technologists and the interests of science users.

Placing particular emphasis on consultation with the science and technology community, users of science and technology, including Maori and the wider community.

Ensuring that the activities of the Ministry occur with a best practice framework.

Future Organisational Directions

The Ministry is committed to the establishment of long term directions for its own development. The ability of the Ministry to do this has been strengthened by the Government's commitment to Strategic Result Areas (SRAs) with a three year time horizon. Because the Government, through the Minister, is the primary client for all Ministry outputs, the department's own forward planning is inextricably linked to that of the Government itself. Forward planning will be further strengthened when the Government finalises its long term strategy for science and technology in New Zealand (known at this stage as *RST:2010*).

Broad directions for the Ministry's internal development are as follows:

- retention and enhancement of high quality staff with a mix of skills which include particularly policy analysis and implementation, investment management, science, and technology
- the strengthening of internal organisational flexibility and a move toward project-focused operation so that both staff and financial resources can be effectively directed, managed and motivated to the benefit of the Ministry's clients, and
- the continuing implementation of a quality management programme intended to progressively enhance the quality of outputs and the embedding of quality consciousness in the organisational culture.

Maori Participation

The Ministry recognises the Treaty of Waitangi as the basis for considering Maori participation in the development of science and technology policy. Processes for understanding Maori issues in science and enabling Maori participation in policy development will continue to be strengthened. These processes will include (but not exclusively) the continuing operation of the Ministry's Maori Advisory Committee, Nga Kaitirotiro Putaiao.

Management and Staff

Basil Walker	Chief Executive (until 5 July 1996)
Don McGregor	Chief Scientist
James Buwalda	Chief Policy Adviser
Kim Carpinter	Manager, International Science
Frank Edwards	Manager, Information Services
Julie-Anne Lee	Manager, Resources

The staff of the Ministry is expected to continue at a level of approximately 35 over the coming year.

Organisational Structure

The Ministry comprises a number of functional units that work interactively in the achievement of the Government's objectives.

 MINISTRY OF RESEARCH, SCIENCE AND TECHNOLOGY

The **Office of the Chief Executive** coordinates ministerial services and is responsible for corporate management.

The **Policy Group** develops science and technology policy advice on the management of public investment in science, manages all major third party purchase agreements and manages contracts for other Non-Departmental Output Classes.

The **Office of the Chief Scientist** facilitates the provision of scientific and technical input in developing public policy across the range of government activity and to the Ministry's own activities, assists with the coordination of science, and manages associated Non-Departmental Output Classes.

The **International Science Unit** manages New Zealand's intergovernmental science relations and associated Non-Departmental Output Classes.

The **Information Services Unit** provides time series information on R&D expenditure and personnel, the productivity and morale of the science and technology community and the science infrastructure, and technology creation and utilisation. The unit also provides library and computer services.

The **Resources Unit** provides internal support services for the Ministry, including corporate planning, corporate communications, finance, personnel, administration and accommodation.

Figure 5: Organisation Chart

